

Amendments to the Claims:

This listing of claims will replace all prior listings of claims in the application.

Listing Of Claims:

Claims 1-3 (canceled):

Claim 4 (currently amended): A method according to claim 1, of detecting disposition of a plurality of shot areas on an object, the plurality of shot areas being exposed to a pattern in accordance with the detected disposition, said method comprising:

a first detection step of detecting an alignment mark in the plurality of shot areas, the alignment mark including elements that have an interval therebetween;

an evaluation step of evaluating reproducibility of the interval of the detected alignment mark;

a determination step of determining a number of alignment marks in the plurality of shot areas based on the evaluated reproducibility; and

a second detection step of detecting the disposition of the plurality of shot areas by detecting a plurality of alignment marks in the plurality of shot areas, a number of the plurality of alignment marks having been determined by said determination step,

wherein said determination step determines, as the number of alignment marks, a minimum natural number N_s that satisfies $N_s \lceil \frac{M_r}{A_r} \rceil \geq \alpha \cdot (M_r/A_r)^2/N_m$, where M_r is the reproducibility, N_m is a number of the mark elements included in the alignment mark, A_r is required alignment accuracy, and α is a corrective coefficient that is not smaller than 1 and not greater than 3.

Claim 5 (currently amended): ~~A method according to claim 1,~~ of detecting disposition of a plurality of shot areas on an object, the plurality of shot areas being exposed to a pattern in accordance with the detected disposition, said method comprising:

a first detection step of detecting an alignment mark in the plurality of shot areas, the alignment mark including elements that have an interval therebetween;

an evaluation step of evaluating reproducibility of the interval of the detected alignment mark;

a determination step of determining a number of alignment marks in the plurality of shot areas based on the evaluated reproducibility; and

a second detection step of detecting the disposition of the plurality of shot areas by detecting a plurality of alignment marks in the plurality of shot areas, a number of the plurality of alignment marks having been determined by said determination step,

wherein said determination step determines, as the number of alignment marks, a minimum natural number N_s that satisfies $N_s \geq \alpha \cdot f(N_m, M_r, A_r)$, where M_r is the reproducibility, N_m is a number of the elements included in the alignment mark, A_r is required alignment accuracy, α is a corrective coefficient that is not smaller than 1 and not greater than 3, and $f(N_m, M_r, A_r)$ represents a function of N_m , M_r and A_r .

Claims 6-13 (canceled):